

## ABSTRACT

A slurry dispensing apparatus for use with a chemical mechanical polishing tool for planarizing semiconductor substrates having irregular topology. The apparatus includes a slurry dispensing manifold with a first end suspended over a polishing pad, and a second end for mounting to the chemical mechanical polishing tool. The slurry dispensing manifold has a linear array of nozzles positioned under the suspended manifold. Each nozzle provides an adjusted slurry mixture that is supplied from bifurcated supply lines. A first branch supplying a slurry, and a second branch supplying deionized water. Each nozzle is capable of providing a particular slurry concentration to either decrease or to increase polishing rate in specific zonal areas on a substrate according to its surface topology.